

Improving Quality in Education: Issues and Challenges for Teacher Education in India



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1 Introduction

India has witnessed tremendous expansion in education during the post-independence period—in terms of number of schools, which increased from 230 thousand in 1950–51, i.e., at the inception of planning in the country to 1.5 million in 2020–21. These numbers include primary, upper primary, secondary and higher secondary schools. The number of universities increased during this period from 28 to 1,043 and the number of colleges from 578 to about 42 thousand. There is an explosion in student numbers during this period from 24 to nearly 300 million (Table 1). Elementary education—primary and upper primary education together comprising 8 years of schooling, universalisation of which has been one of the Directive Principles of the Constitution of India (1950), and comes under the reformulated Free and Compulsory Education Act (2009), familiarly known as the Right to Education Act 2009 (MHRD, 2010), is nearly universal with a gross enrolment ratio of 97% and a net enrolment ratio of 92.1%.

The enrolment ratios in secondary and higher secondary level are respectively 79.8% and 53.8% in 2020–21, while in higher education, the ratio was 27.1% in 2019–20. As a result of the massive expansion of education, the system of teacher preparation has come under considerable pressure (Rajput & Walia, 2001). Public expenditure on education also increased over the years; and it accounts for about 4% of gross domestic product in 2019–20, against the goal of 6% which has been promised first in the National Policy on Education 1968 (GoI, 1968), based on the recommendation of the National Education Commission (Education Commission,

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Table 1 Growth of education in India

	1950-51	1960-61	1970-71	1980-81	1990-91	2000-01	2010-11	2015-16	2020-21
Number of schools									
Primary (in thousands)	209.7	330.4	408.4	494.5	561.0	638.4	748.5	840.1	774.7
Upper primary (thousands)	13.6	49.7	90.6	118.5	151.5	206.3	447.6	429.6	442.9
Secondary* (thousands)	7.3	17.3	36.7	51.6	79.8	126	200.1	252.1	291.8
Universities	28	45	93	123	184	256	544	7,990	1,043**
Colleges	578	1,819	3,277	4,577	6,627	10,152	31,324	39,071	42,343**
Enrolments (in million)									
Primary (grades I-V)	19.2	35.0	57.0	72.7	97.4	113.8	135.3	129.1	122.0
Upper primary	3.1	6.7	13.3	20.7	34.0	42.8	62.1	67.6	68.5
Secondary*	1.5	3.5	7.2	11.3	19.1	27.6	51.2	63.8	66.0
Higher education	0.2	0.6	2.0	2.8	4.9	8.6	21.8	34.6	38.5**
Gross enrolment ratio (%)									
Primary	42.6	62.4	76.4	83.1	100.1	95.7	115.5	99.2	103.3
Upper primary	12.7	22.5	34.2	40.9	62.1	59.6	81.5	92.8	92.2
Elementary	32.1	48.7	61.9	67.5	86.0	81.6	102.5	96.9	99.1
Secondary	5.3	11.4	14.5	17.3	19.3	33.3	52.1	68.1	79.8/53.8 ⁺
Higher education	1.0	2.0	3.09	5.4	4.3	7.9	19.4	24.5	27.1
Public expenditure on education % GDP	0.6	1.5	2.1	3.0	3.8	4.1	4.1	4.2	4.4**

Note * Secondary includes higher secondary; † secondary and higher secondary separately; ** 2019-20

Source UDISE + MHRD, New Delhi <http://dashboard.seshagun.gov.in/mhrdreports/#/home>; AISHE: 2019-20, MOE, New Delhi

Education in India and Selected Educational Statistics for years until 2000-01 and 2010-11 and after: Flash Statistics (NUEPA, 2015; NUEPA, 2015-16);

DISE/UDISE (MOE, 2020-21); Secondary Source until 200-01: Tilak (1990); Public Expenditure: *Educational Statistics at a Glance 2015-16*

1966). The goal is often reiterated later, *inter alia*, in the National Education Policy 1986 and 2000 (GoI, 1986, 1992, 2020).

The picture of impressive performance of Indian education noted above with respect to quantitative expansion, falls apart when we examine the quality of education. A sizeable number of children drop out before completing the given level of education. Out of every 100 children enrolled in grade I, only four-fifth complete primary education of five years; two-thirds complete upper primary education; and only about one-third of the children finally reach grade XII. Though over the years, there has been a remarkable improvement in the reduction of dropout rates, the improvement during the last five years, as shown in Fig. 1, is neither consistent nor significant, and the current situation is still not satisfactory.

Dropout rates or their obverse are considered as reflective of internal efficiency of education, or more clearly the quality of education. But a better indicator of quality is the level of learning by the children in schools. India scored poorly in PISA test in 2009, when it for the first time participated in it. The results related only to two states, viz., Tamil Nadu and Himachal Pradesh and cannot be generalized. But nation-wide surveys have also revealed that the levels of learning of the children in the school system are not satisfactory. According to a 2016 survey in rural India (Pratham Foundation, 2016), only 48% of the children in grade V were able to read a grade II level text book; and 27% of the children in grade VIII could not read the same. More than half the children in grade VIII could not perform a small division in elementary mathematics (Table 2). The trends show that the reading abilities of children have further deteriorated by 2018. More representative national surveys (NCERT, 2014,

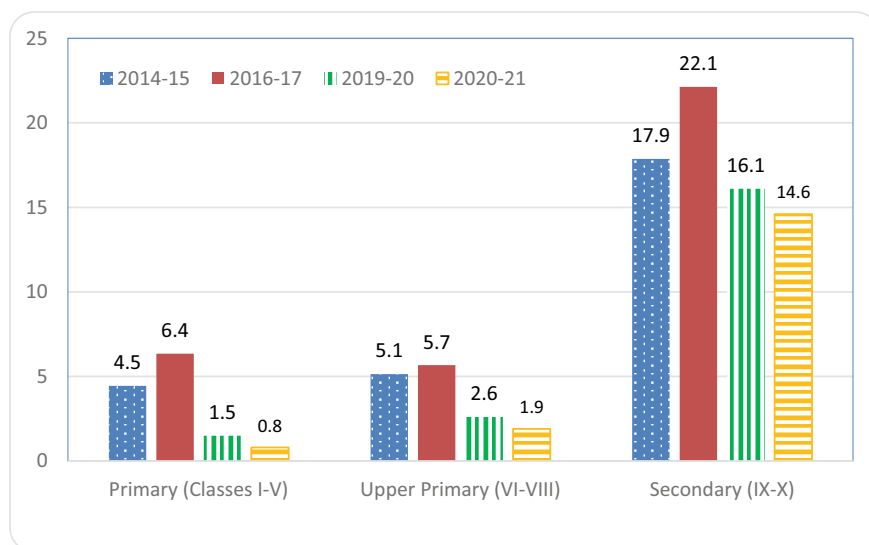


Fig. 1 Rate of annual dropout in school education in India (%). Source UDISE + MHRD, New Delhi. <http://dashboard.seshagun.gov.in/mhrdreports/#/reportDashboard/sReport>

Table 2 Levels of learning in schools in India

(a) Levels of Learning of Children in School Education in Rural India, 2016			
	Grade III	Grade V	Grade VIII
% of Children who can read grade II level text	25.1	47.8	73.0
% of Children who can do at least subtraction*/division**	27.6	25.9	43.2
% of Children who can read grade II level text (2018)	20.9	44.2	69.0
(b) Levels of Learning of Children in School Education in India, 2017			
(% of Children who have answered questions correctly)			
Subject	Grade III	Grade V	Grade VIII
Mathematics	71	48	39
Language	75	56	55
Environmental Sciences	71	54	
Science			41
Social Sciences			38

Note * in grade III; ** in grade VIII

Source (for a): Pratham Foundation (2016); ASER Centre (2020): *Learning Trends 2012–18*

Source (for b): NCERT (2017): National Achievement Survey <http://www.ncert.nic.in/programmes/NAS/SRC.html>

2017) give slightly better, nevertheless not very satisfactory results. Even though we do not have data on similar aspects in secondary and higher education, issues such as unemployment and deficit in values and character of the graduates warn about the deteriorating levels of quality and standards in education. It is increasingly being realised that the quality of education is one of the key challenges that the Indian education system needs to address on a priority basis to arrest deteriorating quality in education which will have an effect on the society.

Among several factors that account for poor quality of education outcomes, teachers are found to be accounting for the most (Tilak, 2011). Many children were found to be dropping out or failing to transit to the next level of education because of school and teacher related issues (Govinda & Bandyopadhyay, 2019). Teachers are the main academic resource in the school system across the world. They are also ideal role model for students. Though teachers are responsible mainly for transfer of knowledge, they do influence students in various ways shaping their minds and lives. They contribute to the overall character building of the young students and thereby in the making of future citizens with character and universal human values. They occupy a key position in ensuring efficient functioning of schools. In fact, the teacher is the single most important person for the efficient functioning of a school. Hence, it is widely held that the quality of schooling or quality of students cannot exceed the quality of teachers. Teachers are responsible for effective teaching learning process in classroom that in turn, will improve learning outcomes of students, by creating a strong positive learning environment, by adopting appropriate pedagogic methods, teaching techniques and evaluation process, etc. In brief, teachers are the architects

of the society. Hence, teaching has been recognised for long as a noble profession. Traditionally teachers have been highly respected and placed at a high unique place in Indian society for centuries. But the situation has been rapidly changing. While the expectations from the teachers and school systems have been rising, teaching profession faces new challenges with inadequate numbers of teachers and declining teacher quality on the one side, and inadequate school infrastructure and facilities and entry of new generations of students with varying aspirations and changing school and socio economic environment (Govinda & Bandyopadhyay, 2019; Govinda & Mathew, 2018) on the other.

Drawing essentially from secondary data, this chapter attempts to discuss the present status of teaching profession in India, the availability of teachers, the supply of trained and qualified teachers in schools, the system of teacher education/training in India and other complex issues. The chapter concentrates on school education, though some of the issues examined and the problems identified here are applicable to higher education as well. Some aspects relating to teaching profession in higher education in India were discussed, *inter alia*, by the author elsewhere (Tilak & Mathew, 2017). Scholars and policy makers in other countries may find the Indian experience analysed here useful in their efforts towards reforming their teacher education systems.

2 Teachers in School Education

The education system in India engages about 14 million teachers, one of the largest teaching professional groups in the world. The school system (primary, upper primary, secondary and higher secondary schools) itself accounts for nearly 10 million teachers in 2019–20 who are teaching across 1.5 million government, government-aided private and private unaided schools¹ (MOE, 2020, 2021). However, it may be easily noted that the growth in the number of teachers is not proportionate to the growth in the number of students and schools. As a result, the pupil-teacher ratio, i.e., number of pupils per teacher—a crude indicator of adequacy of teachers, has increased over the years. The ratio increased from 24 in primary schools in 1950–51 to 42 in 2010–11; the same in upper primary schools increased from 20 to 34, and in secondary schools from 21 to 31. It is only in the present decade, after the implementation of the Right to Education Act, that one notices significant improvement in the ratio—the ratio coming down to 26 by 2020–21 at primary level, to 19 at upper primary level (Table 3). There was marginal improvement in case of secondary schools. Note that the Right to Education Act does not cover secondary

¹ Government-aided schools are private schools, managed by private trusts/bodies, but are substantially (near about 95% of the total recurring expenditure) financed by the government. Private unaided schools—started either on philanthropic basis, or operating on commercial considerations, essentially depend upon student fees and other contributions. The latter category (working on commercial principles and even de facto for profit) is overshadowing the former category (of philanthropy-based schools).

education; as of now, it covers only primary (grades I to V) and upper primary levels (grades VI–VIII), even though there has been some thinking on extending the right to education to secondary education. In elementary education, though the teacher shortages are high, number of teachers per one thousand population in India, which works out to be 4.7, is fairly comparable with the numbers in other advanced and developing countries. To cite a few cases, the corresponding numbers are 8.2 in Malaysia, 6.4 in Sweden, 5.8 in USA, 4.6 in Finland, 4.5 in China, 4.1 in UK, 3.2 in South Korea, 3.3 in Hong Kong, 3.1 in Japan and Germany 3.0 (around 2010) (Nation Master, n.d.). But these international comparisons do not make much meaning, as the felt shortages in India are acute.

The estimates of number of teachers per one thousand population and pupil-teacher ratios in India given in Table 3 are national averages; they vary widely among several states, and within states between different districts, villages, and between schools. For example, among the various states, the highest ratios at primary level are 55 in the state of Bihar in 2019–20, an educationally backward state, 33 in Uttar Pradesh, and 31 in Jharkhand, another educationally backward state. At secondary level, the ratio is 52 in Bihar and 34 Jharkhand and 29 in Uttar Pradesh. The corresponding figure is further high in higher secondary schools, 66 in Odisha, 55 in Jharkhand, 59 in Bihar and as high as 41 in Uttar Pradesh (Fig. 2).

As per the norms of the Right to Education Act, a primary school should maintain a pupil-teacher ratio of 30 per teacher, and an upper primary school 35 students per teacher. But we notice that a large number of schools exist, which are single teacher schools and schools with ratios above the norms, though their numbers and relative proportions are declining. Still around one fourth of total primary schools are having a ratio above 1:30 at primary level and around 14% schools at upper primary level have more than 1:35 (Table 4). Further, nearly 111 thousand schools are functioning with just one teacher, of which 89% are located in rural areas. At the national level 7% of schools are single teacher schools in 2019–20; and it is as high as 10–15% in several states, and even above 15% in states like Telangana, Goa and Arunachal Pradesh (UNESCO, 2021). The phenomenon of singleteacher schools, a strange feature of school system in India, is not confined to primary level only, as we note in Table 4. These schools expose the hollowness of the education process. One can obviously note that the teaching–learning process in these schools gets severely affected.

Based on the accepted norms regarding pupil-teacher ratios and other aspects, it has been found that there is a huge shortage of teachers—gap between supply of teachers and the requirement of teachers at every level of education. For example, estimates prepared by the Ministry of Human Resource development (MHRD), Government of India (GoI) for implementation of the provisions mentioned in the Right to Education Act regarding pupil-teacher ratios, show that the nation would require recruitment of more than half a million additional teachers over and above the then existing vacant positions of about 523 thousand, i.e., in all 1.33 million (GoI, 2011, p. 15). The gap does not seem to have significantly declined during the last few years. In 2017, 17.5% of teaching positions in government elementary schools and 15% in secondary schools were vacant. Presently, the number of vacant positions is estimated

Table 3 Number of teachers and pupil-teacher ratio in schools in India

	1950-51	1960-61	1970-71	1980-81	1990-91	2000-01	2010-11	2015-16	2020-21
Teachers (in ten thousands)									
Primary	53.8	74.2	107.0	136.3	161.6	189.6	210.0	260.6	249.4
Upper Primary	8.6	34.5	63.8	83.1	107.3	132.6	188.8	261.2	248.6
Secondary*	12.7	29.6	62.9	90.1	133.4	176.2	250.9	247.4	255.7
Pupil-teacher ratio									
Primary	24	36	39	38	43	43	42	23	26
Upper Primary	20	31	32	33	37	38	34	17	19
Secondary*	21	25	25	27	31	32	22	31	18/26 ⁺

Note * includes higher secondary; ⁺ PTR for 2019-20 secondary and higher secondary are separately given

Source Selected Educational Statistics and Educational Statistics at a Glance (various years)

UDISE+, 2020-21, MOE (2021) <http://dashboard.seshagun.gov.in/mhreports/#/reportDashboard/Dashboard>

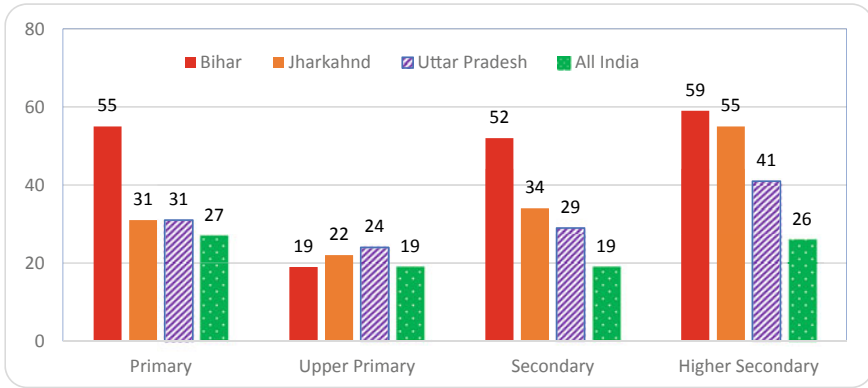


Fig. 2 Number of pupils per teacher in school education in select educationally backward states in India, 2019–20. *Source* UDISE+, 2019–20, MOE (2021). <http://dashboard.seshagun.gov.in/mhrdreports/#/reportDashboard/sReport>

Table 4 Single-teacher schools and schools with pupil-teacher ratio above norms

	Percentage of schools with pupil-teacher ratio above norms		Percentage of single-teacher schools		
	Primary PTR > 30	Upper primary PTR > 35	Elementary	Secondary	Higher secondary
2010–11	42.4	31.3	8.9	2.7	0.6
2014–15	27.1	14.1	8.3	4.3	3.8
2016–17	22.6	12.1	7.2	4.9	4.2
2017–18	22.8	16.0			

Source NUEPA (2012–2016a, b); UDISE Flash Statistics (relevant years). NUEPA, New Delhi

to be 1.1 million, 69% of which are in rural schools (GoI, 2019; UNESCO, 2021). Even schools run by the Union government—the *Kendriya Vidyalayas* also suffer from a severe degree of shortage of teachers. Obviously schools without sufficient number of teachers cannot meaningfully serve the purpose. The vacancies may be due to several factors, including non-availability of qualified teachers, recruitment policies, hurdles in recruitment posed by judicial interventions and others. The shortage is also partly due to emigration of several teachers to other professions and to other countries.²

Apart from serious overall shortage of teachers, the teaching profession in India is also associated with quite a few serious problems that affect the quality and functioning of the schools.

² 55% of school teachers and 62% of college teachers look for jobs abroad! <https://www.edarabia.com/why-67-percent-of-teachers-in-india-seek-jobs-abroad/>.

3 Quality of Teachers

3.1 Teachers' Qualifications

The issue of teacher supply in India is not only of numbers of teachers; more importantly, it is also about the quality of teachers. An important aspect of quality of teachers refers to teacher's qualification and training, though qualified teachers do not necessarily mean quality teachers. Availability of trained qualified teachers in schools is one of the foremost prerequisites for efficient functioning of schools and an effective teaching learning process. Studies have shown that "better" teachers produce better effects on students' learning and the cognitive and non-cognitive effects last for a long time (e.g., Crawford & Rolleston, 2020).

Out of the total teachers working in schools, around 10% possess the qualification of mere higher secondary level education and a majority of them are teaching in primary schools; 41% teachers are graduates (Bachelor's or first degree holders) and 38% are post-graduates (Masters and above degree holders) who mainly teach in higher grades. Substantial numbers of graduate teachers are also found teaching primary and upper primary grades but around three-fourth of all teachers teaching in higher secondary schools possess master's degree. It is also to be noted that around 6% teachers teaching at this level are further educated with research (M.Phil. and Ph.D.) degrees indicating that a considerable proportion of teachers who are presently teaching in Indian schools are highly educated (Table 5).

Table 5 Percentage of teachers in schools, by academic qualification (2018–19)

Academic qualification	Pre-primary	Primary	Upper primary	Secondary	Higher secondary	Total (n = 100)
Higher secondary	13.17	22.73	0.00	0.00	0.00	9.50
Graduate	45.20	44.45	45.57	38.91	14.96	41.43
Post graduate	37.10	24.13	36.16	53.56	76.34	37.57
M. Phil.	0.64	0.39	1.28	2.19	4.02	1.29
PhD	0.27	0.20	0.36	0.75	1.79	0.48
Post-Doctoral	0.06	0.04	0.06	0.09	0.20	0.07
Total	100.0	100.0	100.0	100.0	100.0	100.0
Total (in thousands)	124.7	4,339.5	3,365.6	1,860.4	862.1	10,552.2

Source UDISE+, 2018–19, MOE (2020)

<http://dashboard.seshagun.gov.in/mhrdreports/#/reportDashboard/sReport>

3.2 *Trained Teachers*

Training—pre-service and in-service professional training is generally considered as an important aspect in school education and it is also considered as a basic requirement for one to become a teacher. Though all trained teachers are not necessarily teachers of high quality, training is an essential, but not a sufficient condition for ensuring quality education. Trained teachers can be expected to perform better than untrained teachers; they are expected to have better knowledge of the subject and knowledge of better methods of teaching and pedagogy; and they could be expected to be innovative in teaching and management of the classrooms and school development as a whole. Accordingly, teacher education and training have been emphasised in India for a long time and generally only formally trained teachers are recruited in schools. As per the existing policy, a person can be eligible for teaching in an elementary school either after 12 years of schooling plus 2 years of pre-service teacher education or 12 years of schooling and a four-year bachelor's degree programme in education³ (offered by very few institutions in the country). Thus, the 'trained' teachers are those who have successfully completed a formal teacher training programme of two to four-year duration. Until mid-1980s, only trained teachers were recruited and hence they used to account for 95–99% of all school teachers in India. But due to adoption of cost-saving measures in recent years and somewhat flawed teacher recruitment policies after the economic reform policies were introduced in the early 1990s (Tilak, 2009), non-availability of trained teachers, and for many other reasons, untrained teachers have been recruited in large numbers. Recruitment of untrained and under-qualified teachers has subsequently become a widely acceptable practice in many states in India. Accordingly we note the system suffering from increasing proportion of untrained teachers over the years. In 2015–16, 82% of teachers in elementary (primary plus upper primary) schools, 87% in secondary schools and 82% in higher secondary schools were professionally trained. In other words, 18% of teachers in elementary level were untrained; 13% in secondary and 18% at higher secondary level were also untrained. But there are wide variations across the states in India. Note that education is a 'concurrent subject' as per the Constitution of India, but school education is largely a state (provincial) subject, though Union government also plays an important role in it. The proportion of trained teachers in primary schools had turned to be distressingly low in states like Madhya Pradesh, and Chhattisgarh where only about 65% of the teachers were trained, compared to nearly 90% at all-India level in 2018–19. In most of the North Eastern states the corresponding proportion is much less, though this represents an improvement essentially in primary and upper primary levels, only after the adoption of the Right to Education Act. According to the 8th All-India Survey of Education (NCERT, 2009), about 15% of teachers in all levels of school education were untrained teachers. As per 2018–19 data, 17% of teachers in primary, 16% in upper primary levels, and around 10–11%

³ The bachelor's (first) degree in education, B. Ed. studies used to be of only 9-month duration, which was increased to two years, and very recently it is proposed to be of four years. This is discussed later in this chapter.

Table 6 Percentage of professionally trained teachers

	Primary	Upper primary	Secondary	Higher secondary
2002 (7th AIES)	78.6	80.8	87.2	83.3
2009 (8th AIES)	84	83.7	86	84.1
2012–13	78.6		87	85.9
2015–16	82.4		87	81.7

Source All-India Educational Surveys. NCERT. UDISE: Flash Statistics. NIEPA

of those in secondary/higher secondary schools were found untrained, that is, they do not possess the prescribed qualifications in training (Tables 6 and 7).

Table 6 also shows that there was an increase in the proportion of untrained teachers in elementary education between 2002 and 2012–13, and between 2009 and 2015–16. There was an increase of the same in higher secondary education also. The

Table 7 Teachers by professional qualification, 2018–19 (%)

Name of professional qualifications	Grades which are taught by teachers					Total
	Pre primary	Primary	Upper primary	Secondary	Higher secondary	
B. Ed. or equivalent	34.43	26.87	47.41	69.92	69.63	44.59
Bachelor of Elementary Education (B. El. Ed.)	8.05	3.91	3.84	2.95	2.03	3.61
Diploma/certificate in basic teachers' training of not less than two years duration	17.65	39.91	18.02	5.53	3.26	23.61
Diploma/degree in special education	2.10	1.24	1.36	1.17	1.13	1.27
M. Ed. or equivalent	4.06	1.18	2.52	4.22	7.20	2.67
None	18.86	17.08	16.15	10.24	10.66	15.07
Others	12.66	7.91	5.70	5.31	5.71	6.62
Pursuing any relevant professional course	2.20	1.92	1.38	0.65	0.39	1.40
Total	100	100	100	100	100	100
Total number of teachers (in thousands)	124.7	4,339.5	3,365.6	1,860.4	862.1	10,552.2

Source UDISE+, 2018–19, MHRD, New Delhi

<http://dashboard.seshagun.gov.in/mhrdreports/#/reportDashboard/sReport>

Table 8 Trained teachers as percent of Total, by type of school

Year	Government	Government-aided	Private unaided	Others	Total
2013–14	81.41	89.79	74.39	40.31	79.03
2015–16	83.82	90.09	74.28	40.56	80.31
2016–17	85.39	90.23	74.62	41.29	81.13

Source Panda (2019)

Table 9 Teachers with varied teacher training qualifications, 2016–17 (percent)

Qualification	Government	Government-aided	Private unaided	Others	Total
No qualification	14.56	9.76	25.35	58.69	18.83
Diploma	31.62	20.70	12.25	7.30	23.77
BE & Ed	4.46	4.99	5.73	4.01	4.89
Bed	37.65	56.38	46.77	20.61	41.77
Med	2.51	3.82	2.60	1.41	2.63

Source Panda (2019)

situation in case of secondary education has also worsened, though the fall is only very marginal.

The distribution of teachers across different types of schools is also an important issue. Government and government-aided schools are in a better situation in terms of proportion of trained teachers, than private unaided schools. There is also marginal improvement in case of government schools, as one can note in Table 8.

It is also interesting to examine the qualifications of the teachers in various kinds of schools. In terms of bachelor's and master's degree in education, government-aided schools and private unaided schools have more trained teachers. But paradoxically private unaided schools also have the largest proportion of untrained teachers. In 2016–17, out of the 2.8 million teachers in private unaided schools, 710 thousand were untrained. In terms of teachers with diploma/certificate course in teacher training, government schools and government-aided schools are in a better situation (Table 9).

As per latest estimates, 41% of teachers at primary level, 54% at upper primary level, 52% in secondary and 65% in higher secondary levels in private unaided schools are under qualified teachers; and the corresponding proportions are much less in government and governed-aided schools (UNESCO, 2021).

3.3 Barefoot Teachers

Apart from recruiting regular teachers who are untrained, part-time teachers, contract teachers, voluntary teachers, *para* teachers, guest teachers, and ad-hoc teachers, are

recruited, in many states in large numbers, particularly during the 1990s, after the economic reform policies were introduced (Tilak, 2009). Over the years, there has been a significant growth of such unsuitable—under qualified and under-trained teachers, under different names, largely known as para teachers. They are known under different nomenclature in different states, e.g., *Shiksha Karmis* in Rajasthan and Madhya Pradesh, *Shiksha Mitras* in Uttar Pradesh, and *Vidya Sahayaks* in Gujarat, *Gurujis*, *Sahayaks*, *Vidya* volunteers in other places, etc. There were about 200 thousand such para teachers in primary and upper primary schools in 2002, constituting 6% of full time teachers in primary and 10% in upper primary schools. Many of these teachers are not necessarily formally trained. This may be partly due to serious budgetary constraints on the one hand, and partly to avoid problems relating to teacher management on the other. In some cases this is also felt necessary as enough fully qualified trained teachers are not available for recruitment on a full-time basis and at the same time as many unemployed and untrained youth are available. The recruitment of such teachers also happens through ad-hoc and non-standardised processes compromising the quality of recruitment, also involving corruption and favoritism.

Part-time teachers in rural primary schools have been growing in large numbers. There were 1,300 part-time teachers in primary schools in 1986 and the number has increased by three times by 1993, and by another 4.5 times by 2002. About 18,000 teachers were working as part-time teachers in 2002. As per the recent data, there are total 7,942 para-teachers at primary only schools while, and 18,815 such teachers at upper primary only schools. Similar is the growth in part-time teachers in upper primary schools. More interestingly, the phenomenon of voluntary/contractual teachers is a new one. Probably there were no teachers of this kind in 1986. As many as 25 thousand teachers in primary schools and another 10 thousand teachers in upper primary schools in rural areas in 1993 belonged to such a category of teachers. In 2015–16 still about 13% of teachers in primary and upper primary levels were contractual teachers and two-thirds of them untrained. In all, by 2018–19, there were 895 thousand contractual teachers and 69 thousand part-time teachers in school education in India and the latter have grown fast (Table 10). A majority of the para teachers are untrained teachers: among the contractual teachers in primary and upper primary levels, one third are untrained; the proportion was higher above 50% in 2010–11. After the promulgation of the Right to Education Act, the numbers relating to such teachers were expected to come down to negligible levels, in fact to zero level, but the phenomenon continues. Between 2011–12 and 2017–18, contract teachers in government elementary and secondary schools increased from 316 to 632 thousand (Ramachandran et al., 2020), and if part time teachers are included, the number increased to 895 thousand in 2018–19, as the figures in Table 10. As UNESCO (2021) observes, 28% of teachers in primary and upper primary government schools and 68% in private schools work without any job contract. They are like wage earners in unorganised informal sector.

All this obviously has already produced serious adverse impacts on the quality of instruction. After all, a well-trained teacher is generally believed to be able to make very significant contribution to students' performance including in the labour market

Table 10 Growth in number of contractual and part time teachers in rural areas

	Contractual teachers			Part-time teachers		
	2015–16	2018–19	Growth*	2015–16	2018–19	Growth*
<i>Category of School</i>						
Primary	3,37,994	3,85,024	4.6	4,419	7,942	26.6
Primary with Upper Primary	1,80,976	1,80,657	-0.1	10,443	14,369	12.5
Primary with Upper Primary, Secondary and Higher Secondary	59,979	85,358	14.1	2,310	7,532	75.4
Primary, Upper Primary and Secondary Only	60,111	81,499	11.9	2,464	5,803	45.2
Upper Primary only	48,641	49,141	0.3	20,883	18,815	-3.3
Upper Primary and Secondary	34,809	34,437	-0.4	5,232	5,866	4.0
Up Primary, Secondary and Higher Secondary	50,750	51,452	0.5	5,873	7,193	7.5
Secondary Only	9,979	10,919	3.1	228	383	22.7
Secondary with Higher Secondary	11,392	7,535	-11.3	263	480	27.5
Higher Secondary only/Jr. College	7,684	9,149	6.4	665	675	0.5
Total	802,315	895,171	3.9	52,780	69,058	10.3

Source UDISE+, 2018–19, MHRD, New Delhi

Note * average annual growth per annum (%)

<http://dashboard.seshagun.gov.in/mhrdreports/#/reportDashboard/sReport>

in terms of higher earnings (Kingdon, 2006; Tilak, 2011; Burgess, 2019; Bressoux, 1996). In fact, the phenomenon of increasing numbers of untrained and under qualified teachers was argued to be leading to “rapid weakening and general dismantling of the structure of primary education” (Kumar et al., 2001, p. 565). But the idea of not having full time qualified and trained teachers, and rather having para-, contractual, part-time teachers and teachers with no contract whatsoever, has gathered some fashion, and is based on the belief and also some research evidence (Muralidharan & Sundararaman, 2013) that job insecurity and low wages bring greater efficiency. This is also broadly in conformity with the new pro-market economic policies, adopted by the government since 1990s that favour down-sizing of the public system and its privatisation. More and more state governments favoured the scheme of *para* teachers, as they help in huge saving of public resources on the one hand, and in avoiding of managerial problems of teachers on the other; and at the same time, governments could claim to have marched a long way on fulfilling the Constitutional Directive on universal elementary education. But the effects of such practices on quality of education are now being feared to be too serious to bear in the long run, or

even in the short run. Such practices damage the morale of the teachers, and demotivate the entire teaching profession. As Ramachandran et al. (2020, p. 9) observed, harming the image of the teaching profession, they lead to “dysfunctional dynamics in schools and affects school culture, thereby, directly affecting student learning”. The underlying view that school education does not require a fully qualified and trained teacher is a dangerous assumption (Tilak, 2009), having serious long term implications on the quality of education, though it cannot be said that all trained teachers are necessarily of high quality, having a higher level of knowledge of the subject and other aspects.

3.4 *The Academic Quality of Teachers*

After the Right to Education Act was made operational in 2010, Teacher Eligibility Test (TET) for teachers and Principal Eligibility Test (PET) for principals/head teachers were introduced, as a part of minimum qualifications for an individual to be appointed as a teacher and principal respectively, to ensure that after they obtained professional qualifications, they have requisite knowledge to join the teaching profession. Central Teacher Eligibility Test (CTET) is conducted by Central Board of Secondary Education (CBSE), and this is necessary for all aspiring teachers who wish to join as teachers in Union (central) government schools. States also conduct similar state level teacher eligibility test and the states which do not wish to conduct TET might consider the central test score for recruitment of teachers. University Grants Commission (UGC) conducts National Eligibility Test (NET) for teacher educators, i.e., for teachers in teacher education institutions.⁴ Mostly the state public service commission is the authorised agency for recruitment of teachers but in some states Teacher Recruitment Boards have also been established for this purpose. Most states conduct a test for selection of the suitable candidates for teaching profession. As noted by the Central Advisory Board of Education (CABE) committee in 2016, “Almost all [states] include an annual test held by the education authority, the Public Service Commission or an appointed agency for government recruitments” (GoI, 2016). Some states have used the TET as a recruitment test, some have given it weightage in recruitment and a few others have kept it out of recruitment process completely.

The results of the tests conducted are reflective of the teacher’s knowledge of the subject, as the TET mainly assesses the subject knowledge of the candidates (Dalal, 2017). The results of the CTET conducted by the union (central) government agency, were shocking. Kremer et al. (2005) reported that only 4% of teachers in the country were qualified in the TET; in Uttar Pradesh and Bihar, three-fourths of the teacher-applicants could not do simple percentage sums of grade V level. Since 2011, the

⁴ In fact, UGC conducts NET—national eligibility test in all subjects, which is a requirement for the appointment as teachers in colleges and universities. This is also required for UGC fellowship for students leading to research degrees (Ph.D.).

Table 11 Results of the central eligibility test conducted for teachers

	Number appeared	Number passed	Pass percentage
January 2021	23,47,217	11,04,454	27.65
February 2015	6,77,554	80,187	11.83
February 2014	7,50,000	13,425	1.70
July 2013	7,76,000	77,000	9.96
November 2012	7,95,000	4,850	0.61
January 2012	9,00,000	55,422	6.10
June 2011	7,60,000	97,919	9.00

Source <https://career.aglasem.com/ctet-2018-result/>

pass percentage in the central test has been below 10%, except in 2013 when it was 11%. In 2012 over 99% of the aspirants failed to clear the test. In 2013 only 11% of nearly one million candidates qualified in the test (Gohain, 2015), while just 13,428 of 0.8 million aspirants passed the test, conducted in January 2014. That is, only 10% of those who took the test were found to have above minimum level of knowledge of the subject. The results of the tests conducted in December 2012 and March 2014 revealed more distressingly that less than one percent and only 2% were successful in the tests, respectively. The results of central test conducted in 2015 show that 13.5% of 0.7 million candidates who took the test were successful in obtaining above the minimum level of scores. The pass percentage has improved in recent years; but still only around 28% candidates could pass this examination in 2021. In 2020–21, a total of 23.5 lakh⁵ candidates appeared in the central test conducted by CBSE in January, 2021. These candidates included 12.4 lakhs for paper-1 (for teaching in grades I to V in primary school), and 11 lakhs for paper-2 (for teaching in grades VI to VIII in upper primary school). Out of these 23.5 lakh candidates, 6.5 lakhs successfully cleared the exam (4.14 lakh candidates cleared the paper 1 examination and 2.39 lakh candidates cleared the paper-2). Table 11 gives the results of the central test conducted from 2011 onwards.

Examining some of these results, Tilak (2017, p. 160) has summed up, “A very high proportion of teachers fail in national/state level teacher eligibility tests; there is lack of interest in teaching; and above all, lack of accountability, with poor supervision and monitoring mechanisms in place.” The test is not too tough to pass; rather the aspirants lack even the basic knowledge with reference to child development, teaching skill and languages. The poor performance of teachers is not a very good commentary on the quality of teachers, and also the performance of the teacher education institutions (and programmes) in the country. All this shows that improvements in the pay structure of teachers made over the last two decades do not seem to have any effect in attracting talented teachers to the profession; but have attracted greedy persons to apply for teaching jobs.

⁵ One lakh means 100,000 and 10 lakhs make one million.

While most states conduct tests for recruitment but the content of the test often falls short of providing a reliable means of identifying committed and able teachers for recruitment. The TET, which has been only recently made mandatory for appointment of teachers in schools, is still in early stages, and there has been little investigation of the format and content of the test to determine their validity and reliability; yet this served as a wakeup call on the alarming problems being caused by poor and distressing quality of teacher education system in India.

3.5 *Teacher Absenteeism*

An additional problem the school education in India faces is teacher absenteeism, or absence of teachers without formal permission for leave of absence, which causes lower level of teacher attendance. This is a problem that many schools face in India and the problem is indeed serious in several states. Quite a few surveys (e.g., PROBE 1999; Kremer et al., 2005; Bhattacharjea et al., 2011; Muralidharan et al., 2017) have reported that teachers do not attend schools on all working days. The reasons cited are many, including their involvement in other official/non-official activities, such as collection of data during the decennial census, conducting of national, state and local elections, and other local political, social, cultural and administrative activities. Kremer et al. (2005) found that in general, one in four government primary school teachers remained absent on a given day; and only one of the two were found to be actually teaching in schools. According to Devarajan and Shah (2004), on average the absentee rate among school teachers was around 25% at the national level and it varied between 14.5% in Maharashtra and 16.5% in Madhya Pradesh on one side and 38.3% in Bihar and 39.3% in Jharkhand on the other end. In as many as nine out of 18 major states, the absentee rate was above the national level of 25%. A few studies have found a large difference between *teacher absence* and *teacher absenteeism*. For instance, teacher absence was found to be 23.6% in a World Bank Group study (Muralidharan et al., 2017), while teacher absenteeism, i.e., absence without reason was 4.7% only. Azim Premji Foundation (2017) found in a study of six states, that while overall teacher absence was 18.9%, teacher absenteeism, defined as 'absence without reason', was only 2.5%. The reasons for this could be valid or not necessarily be so. These studies do suggest that the problem is not so serious as was projected or feared by some. However, it is important to note that teacher absenteeism, with or without reason, adversely affects the functioning of schools, the teaching schedule, the instructional process and the overall quality of education. All this stresses the need for making alternative arrangements of providing teachers, when the designated teachers are not able to be in the school/classroom. Interestingly, however, teacher absence does not seem to have statistically significant effect on student's levels of learning (Kumar & Wiseman, 2021).

In addition to teacher absenteeism, several deficiencies relating to teaching-learning process continue to exist severely adversely impacting learning outcomes of students in many developing countries including in India. Many teachers still

follow the traditional teaching methods instead of learner- or child-centered modern approaches as recommended in the National Policy on Education 1986, and the *National Curriculum Framework 2005* (NCERT, 2005; NCTE, 2009). With no strong commitment to teaching profession and no passion for teaching, teachers fail to engage children meaningfully and stimulate independent critical thinking and problem-solving skills of children. They also fail to develop effective communication skills in children and as a result of this, many children, loose interest in teachers and the learning activities and the school itself, resulting in their silent voluntary exclusion from education and eventual dropout from school. It is because of this, one can understand that, dropping out is not a sudden event, it is a process, involving a multitude of push and pull factors (Majumdar & Mukherjee, 2020) stressing the need for schools to take appropriate action concentrating on potential dropouts or the children at the risk of exclusion.

The quality and commitment of the teachers and their competence and performance depend to a great extent upon the quality of teacher education and training they receive in the teacher education/training institutions.

How strong and qualitatively rich is the teacher education system in India?

4 Teacher Education/Training in India

The quality of the education system is directly related to the teacher education system in the country. Accordingly, the need to develop and strengthen the teacher education system in the country was recognised by the Government of India immediately after independence in 1947. Teacher education is broad and comprehensive and the process is ever-evolving and dynamic. Its normally stated objectives include imparting adequate knowledge of the subject, equipping the prospective teachers with necessary pedagogic skills, enabling them to acquire fair understanding of child psychology, developing proper attitudes towards teaching, developing self-confidence, and enabling them to make proper use of traditional and modern instructional facilities. In short, a high quality teacher education programme empowers teachers not only with knowledge and modern teaching methods, but also with ability to handle a multitude of challenges and to work in a team, build teams and lead them and to develop a passion and enthusiasm for the teaching profession (Bandyopadhyay, 2017). This is the written and unwritten mission of teacher education/training system in India. Teacher education programme aims at producing teachers for pre-primary to higher secondary level of education. It aims at developing in prospective teachers excellent teaching skills, good understanding of sound pedagogical theory, and professional skills.

Many efforts were initiated in independent India to expand teacher education facilities, to strengthen them and to ensure and improve quality and standards of teacher education. Both the shortage of trained teachers and their quality have been the dominant concerns of the teacher education programmes. Teacher education in India includes pre-service and in-service training. The current system of teacher

education/training consists of a network of national, provincial and district level resource institutions. Pre-service teacher education is provided in institutions for teacher training for pre-primary/nursery schools, teacher training institutions for primary schools, secondary teacher training schools, Colleges of Education, also known as Colleges of Teacher Education (CTEs), and Institutes of Advanced Study (IASEs) which are a part of university system, besides a few special comprehensive colleges of education for teachers in vocational/special education. The eligibility for primary/elementary school teachers, is a diploma/certificate course in teacher training (D. Ed.,—Diploma in Education or Elementary Education), which is normally of two years duration after senior secondary level education. A bachelor's degree in education (B. Ed.), which used to be of 9-month duration, recently increased to two years, provided by CTEs and IASEs after a Bachelor's degree, or an integrated Bachelor's Degree in Education, is required for one to become a secondary school teacher. Most states in India offer admission in B. Ed., programme to those who completed Bachelor's and Master's degree in any discipline. B. Ed., is the qualification and certification in teacher education. Master's degree in education (M. Ed.) is required to become teacher educators—teachers in teacher education/training institutions. Special education schools provide Diploma in Teacher Education, and Bachelors and Masters' programmes. Some of the familiar programmes of study include B. Ed., integrated programme (e.g., BA/BSc/B. Ed. Integrated Course, Bachelors in Elementary Education (B. El. Ed.), Bachelor's in Physical Education (B. P. Ed.), B. Ed. cum M. Ed. integrated programme, and Diploma/Certificate in Primary Education (DPE). The integrated programmes are of 4–5 year duration. Formal pre-service teacher education/training programmes include below Degree (post-higher secondary education) level Certificate or Diploma level courses of teacher training (used to be normally of one-year duration, but increased to two years), Bachelor's degree level programmes (normally of two-year duration, recently increased from one to two years) and Master's level programmes (normally of two years). Quite a few universities offer nowadays integrated programme (four-year Bachelor's level programme and five-year programmes) in teacher education.

In-service teacher education serves as an indispensable component of teacher education, facilitating mentoring, enhancement, development and updating of knowledge, professional skills and competence of teachers, besides compensating for deficiencies in pre-service training programmes. Apart from enhancement of knowledge of teachers in given subjects, arrival of new devices and approaches of mass media especially electronic devices, virtual classrooms, computer-assisted learning and information and communication technology (ICT), e-learning, etc., has revolutionised and necessitated high quality in-service training of teachers. It is well recognised that teachers need to be made aware of the advances in these areas and be made capable of effectively using them in a rapidly changing learning society. In-services education of teachers, thus becomes essential for bridging the gaps in knowledge and skills particularly in rapidly changing educational scenario. In fact, regular continuous teacher education programmes helping in lifelong learning for teachers, seem to be essential in an emerging knowledge society. In-service education/training providers are State Institutes of Education (SIEs), District Institutes of

Education and Training (DIETs), Secondary Training Education Institutions, and CTEs. DIETs were regarded as a major innovation that would prepare elementary school teachers, provide in-service training/education to teachers, and undertake field-based research.

Both pre-service and in-service training are important inseparable and inter-related components of teacher education programme. While pre-service programmes are offered more or less in a systematic form with a clear focus, the in-service programmes are of varied duration, and seemed to be usually very sporadic, without any clear direction or a purpose (NCTE, 2009).

During the first ten years of development planning, i.e., in the first two five-year plans (1951–56 and 1956–1961), the emphasis was on expansion of teacher education and training facilities. During the third five-year plan (1961–66) the focus was on teacher training for basic education. An important landmark of this period was the setting up of the SIEs in 1964 for providing greater coverage and regional specificity in the programmes of in-service education and training of teachers and other educational personnel concerned with primary education. To widen in-service training programme, during the fourth plan period (1969–74), correspondence courses (distance learning) were developed. National Institute of Open Schooling (NIOS) and Indira Gandhi National Open University (IGNOU) which were established later, offer distance education programmes extensively—both pre- and in-service teacher education programmes. Thus, in-service teacher education is provided under traditional face-to-face mode and also under cascade and distance education modes.

As the recommendations of several committees and commissions started pouring in, reorientation of the curriculum was the task taken up during the fifth plan period (1974–78), which continues to be an important activity. During the sixth (1980–85) and subsequent five-year plans, efforts were made to introduce ICT inputs heavily for strengthening in-service as well as pre-service training programmes, along with upgrading physical infrastructure in the teacher education institutions. After the seventh five-year plan (1985–90), as resolved in the *National Policy on Education 1986*, the DIETs were created for elementary school teachers. In 1998, the National Council of Teacher Education (NCTE) brought out a curriculum framework for quality teacher education, which provided guidelines for the organisation of curriculum for different stages of teacher education. The National Council of Educational Research and Training (NCERT) also brought out teacher education curriculum in 2005, which is based on a much broader vision for the development of curriculum for teacher education, in such a way that it instills the values necessary for peace and social harmony, respect for human rights, peaceful co-existence with nature, concern for quality, need for cooperation and collaboration with the school system and the like. Despite some of the reforms, the curriculum in teacher training programmes is found to be insufficient in coverage of subject knowledge, pedagogic skills, social and emotional skills, and in its linkage to school curriculum; the training is largely theoretical and lecture-based; the mechanisms of assessment of knowledge and skills of teacher education graduates are weak. It has been further noted that the

training institutions do not adopt well defined professional standards, and the norms and standards are not well enforced (Béteille et al., 2020).

Apart from revising and revitalising curricula and promoting research in teacher education, eleventh (2007–12) and twelfth (2012–17) five-year plans have also seen setting up more and more diverse kinds of institutions like the IASEs. While exact recent figures are not available, with the help of twelfth plan proposals, it can be estimated that almost all districts have a DIETs, numbering 646; there are also 211 CTEs, and 39 IASEs, 88 BITEs (MHRD, 2016). Latest figures are not available. The in-service training under the national mission of *Sarva Shiksha Abhiyan* (SSA)—a time-bound programme of universal elementary education, launched by the union government in 2002 (MHRD, 2001) and recently integrated with *Samagra Shiksha Abhiyan*—a mission for the entire school education, includes 20-day in-service training to school teachers, 60-day refresher course for untrained teachers and 30-day orientation for freshly trained recruits. According to current estimates (MHRD, 2020), around 2.25 million or 22.3% teachers were reported to have received in-service training in 2018–19. However there has been considerable variation across the levels of education. For example, while, nearly 30% primary school teachers received in-service training, only 8% teachers teaching in higher secondary schools received such training. The proportion of teachers with in-service training is around 19% at the pre-primary as well as upper primary level, and the corresponding proportion is 17.7% at the secondary level. In addition, 2.1 million or 19% teachers received computer training and teaching through computers. While the proportion of such teachers is zero percent at the pre-primary level, it is around 26% at the secondary and higher secondary levels and 17.2% at the primary and upper primary levels.

4.1 Growth in Teacher Education: Unbridled Private Growth

Presently there are about 16,917 NCTE-approved colleges of education, teacher training institutions, universities, and other similar institutions which are involved in producing trained teachers for the primary, upper primary, secondary and higher secondary schools (NCTE, 2020). The number was a bare 235 at the time of independence in 1947–48. Clearly during the present decade, the growth has been very fast: the number of institutions increased from 11,629 in 2011 (MHRD, 2011, p. 46) to 18,839 in 2015 (MHRD, 2016, p. 50), i.e., in a short period of four years, more than 7,000 new institutions came up. Though the total number came down to below 17,000 in 2019–20, one can note a spectacular growth in the number of teacher education institutions in the country between 1947–48 and 2019–20, as shown in Fig. 3. The number of elementary teacher education institutions increased from 184 in 1947–48 to 1,319 by 1998–99, which jumped to 6,401 by 2013–14. The secondary teacher education institutions increased from 51 in 1947–48 to 818 in 1998–99 and to 9,780 in 2013–14.

Until 1998–99, the focus was on expansion of elementary teacher education institutions; but after 1998–99, higher expansion took place in case of secondary level

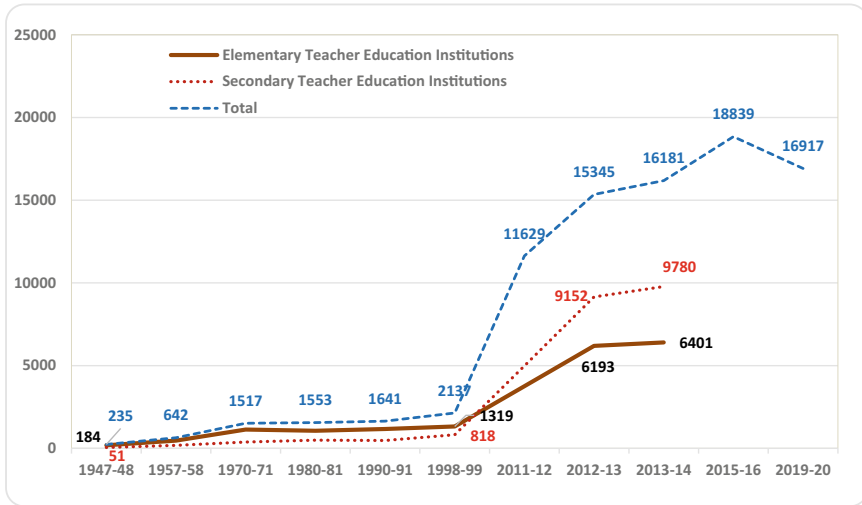


Fig. 3 Growth in the number of teacher education institutions in India. *Source* Samsujjama (2017, p. 6555); GoI (2016); and GoI, NCTE: 2019–20; <https://www.ncte.gov.in/website/statewiseTEL.aspx>

institutions. On the whole, between 1947–48 and 2018–19, while the elementary teacher education institutions increased by 35 times, the increase was by 192 times in secondary teacher education institutions. Today we have more secondary teacher education institutions than elementary level institutions.

Available data, depicted in Fig. 3, show a rapid, but unplanned and haphazard growth in the number of NCTE-recognised institutions of teacher education. In fact, the growth has been so rapid, essentially with the entry of private sector in a big way. Today a large proportion—nearly 92% of the teacher education institutions are in the private sector in 2019–20.

But as many institutions might not be complying with the regulations of the regulatory body, a good number are closed. As a result, while there were 18,839 institutions in 2015–16, the number declined to 16,614 by 2021, though during this period, new institutions also came up. Many unsustainable private institutions were closed either voluntarily or by the state government or the NCTE, when they were found to be violating the official rules and regulations.

The overall numbers relating to the institutions—particularly colleges of education, are increasing essentially in case of private—private unaided (self-financing/fee-dependent) institutions; unrecognised institutions are also flourishing; but the growth in the government institutions or government-aided private institutions is rather negligible. As mentioned by a sub-committee of Central Advisory Board on Education (CABE), “the teacher education space in India is dominated by private players, offering courses of doubtful quality” (GoI, 2016, p. 50). According to this report, in 2015 the private sector comprised of 91% of the all teacher education institutions in

the country. But according to some other estimates, as high as 97% are private institutions; only the remaining three percent are government institutions (Pritam 2017, p. 94). The private institutions also account for 94% of admissions every year (Table 12). While the government institutions increased from 24 in 1951 to 226 in 2013, i.e., by nine times, during this period the number of private institutions increased by 66 times from 104 to 6,622 (Fig. 4). While pre-service teacher education is mostly offered in private institutions, in-service training of teachers in quite a few states is also being outsourced to private entrepreneurs (Batra, 2022, p. 230).

Third, we also note that the numbers increased mainly in case of the B. Ed. colleges, and to some extent in case of secondary level training in teacher education (D. El. Ed.) institutions. There were 6, 848 B. Ed. colleges, and 7,292 secondary level training institutions in 2013. Institutions that offer M. Ed. were very few: 909. The small number of M. Ed. offering institutions and their intake pose serious problems in producing teacher educators.

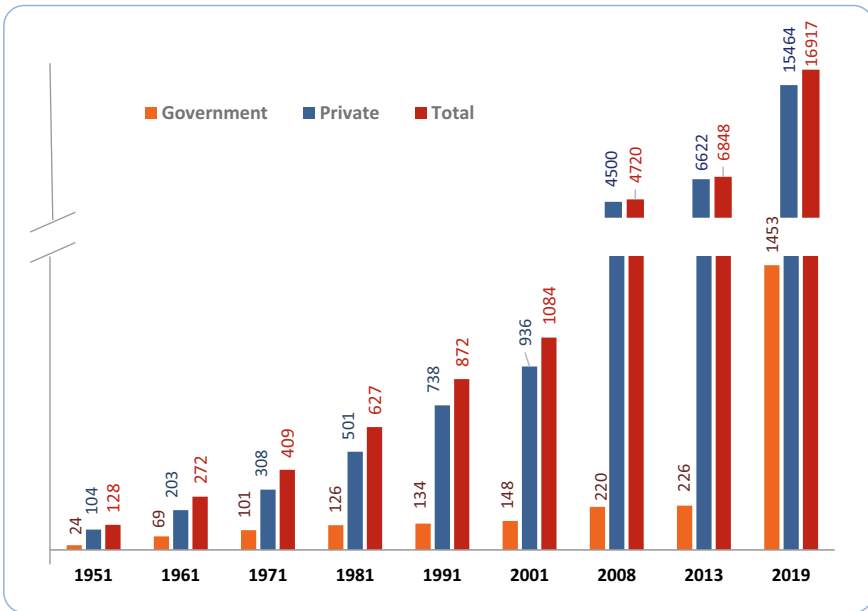


Fig. 4 Growth in government and private teacher education institutions in India (1951–2019). Source Pritam (2018), and Batra (2022) based on NCTE website

Table 12 Institutions of teacher education and intake in government and private teacher education institutions, by type of course, 2013

	Institutions			Intake		
	Government	Private	Total	Government	Private	Total
D. Ed.	764 (10.5)	6,528 (89.5)	7,292 (100)	45,230 (11.1)	362,114 (88.9)	407,344 (100)
B. Ed.	226 (3.3)	6,622 (96.7)	6,848 (100)	25,831 (3.3)	768,318 (96.7)	794,149 (100)
M. Ed.	72 (7.9)	837 (92.1)	909 (100)	2,660 (9.9)	24,176 (90.1)	26,836 (100)
Total	1,062 (7.1)	13,987 (92.9)	15,049 (100)	73,721 (6.0)	1,154,608 (94.0)	1,228,329 (100)

Source Pritam (2017)

Note Figures in () are percentages

4.2 Uneven Growth in Teacher Education

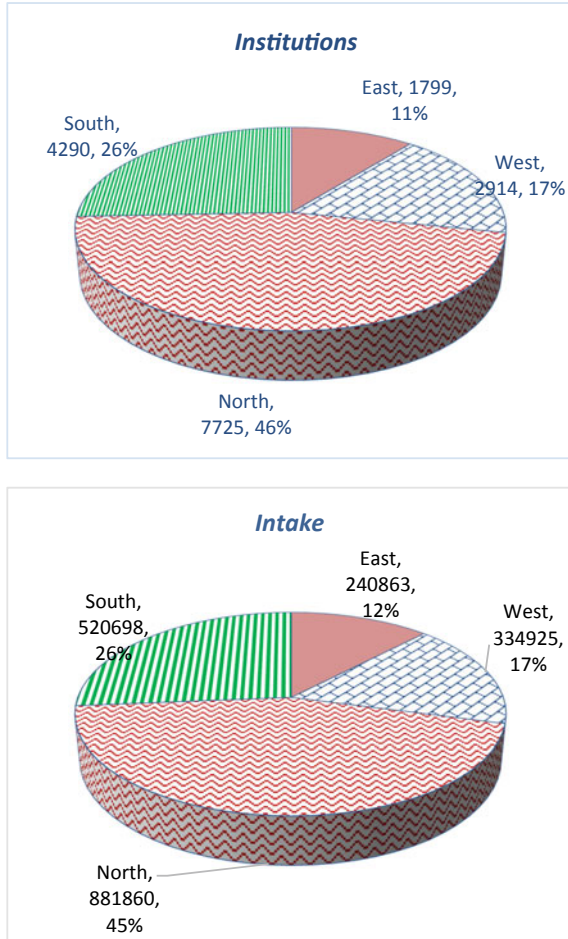
Further, the growth has also been uneven across different regions in the country. Northern and southern regions of the country have a larger number of institutions than the Eastern and Western regions (Fig. 5).

While in all regions private institutions outnumber public institutions by several times, interestingly, the Eastern and Western regions have more government institutions than in the North and the South (Table 13). This depends upon the state policies relating to teacher education and more importantly to private education. As stated earlier, states have varying policies with respect to education in their respective states, though they also follow central guidelines issued by the Union government and its agencies. There are indeed large variations across different states (see Ramachandran et al., 2018). Comparing with similar data available for 2015–16 (Rishikesh, 2017), one may observe that in all the regions while the number of government institutions has marginally increased, there has been a decline in the number of private institutions.

If we compare the numbers of institutions in public and private sector by region and by course of study they offer, we find sharper inequalities across various regions, as shown in Table 14. In relative terms, western region has more institutions offering M. Ed. programmes and also Diploma programmes than the other regions; but the northern region has more B. Ed. colleges. Intakes are also similarly distributed.

Despite rapid growth in the total number of teacher education institutions in the country, the number is highly inadequate and quality of teachers produced is far from satisfactory. The system has an intake capacity of about 1.98 million students (teacher aspirants), while the requirements are much larger and diverse. The facilities available both for pre- and in-service teacher education are highly inadequate to produce the numbers of the kind that are required. In-service teacher training is an important aspect for professional development of teachers. It has been found that while around 30% of total teachers in the country used to receive in-service training a couple

Fig. 5 Regional Distribution of Institutions and Sanctioned Intake (2018–19). *Note* The legends include name of the region, number of institutions/intake and regional distribution (%). *Source* Based on NCTE: *Annual Report 2019–20*



of decades earlier, their proportion came down to 18.4% by 2014–15. Several states like Kerala, Himachal Pradesh, Madhya Pradesh, Uttarakhand etc., have experienced substantial decline in proportion of teachers receiving in-service training, due to lack of adequate facilities. A majority of teachers remain outside the orbit of in-service training.

Further, teachers for teacher education institutions or teacher educators are very few in number. All universities do not necessarily have departments of education. While most recent figures are not available, the Working Group constituted for the twelfth five- year plan in 2011 (GoI, 2016) noted that there were only 98 departments of education in universities and 48 government post graduate colleges offering M. Ed. programme, which is an eligibility qualification to become a teacher educator. These university departments and government post-graduate colleges had an annual intake of 4,315, and together with private institutions, they produce about 20,000 teachers

Table 13 Public and private teacher education institutions in India, by region (2019)

Region	Government	Private	Total	Regional distribution of total
East	422 (23.5)	1,377 (76.5)	1,799 (100.0)	[10.6]
West	231 (7.4)	2,872 (92.6)	3,103 (100.0)	[18.3]
North	333 (4.3)	7,392 (95.7)	7,725 (100.0)	[45.7]
South	467 (10.9)	3,823 (89.1)	4,290 (100.0)	[25.4]
Total	1,453	15,464	16,917	[100]
%	(8.6)	(91.4)	(100.0)	

Source Based on Batra (2022)

Note Figures in () are % to total in each region; Figures in [] refer to % distribution across regions

Table 14 Regional distribution teacher education and intake: public and private institutions and by type of course

Region	D. Ed./D. El. Ed.			B. Ed.			M. Ed.			ALL
	Govt.	Private	Total	Govt.	Private	Total	Govt.	Private	Total	
Institutions										
East	234	174	408	56	482	538	12	19	31	977
West	246	2,388	2,634	37	1,505	1,542	27	298	325	4,501
North	160	1,256	1,416	91	2,774	2,865	15	243	258	4,539
South	124	270	394	42	1,861	1,903	18	277	295	2,592
All-India	764	4,088	4,852	226	6,622	6,848	72	837	909	12,609
Intake (in thousands)										
East	13.7	9.0	22.6	5.5	49.9	55.4	0.42	0.38	0.80	78.8
West	12.2	116.3	128.5	3.7	150.0	153.7	0.92	10.28	11.19	293.4
North	12.2	82.7	95.0	12.8	295.5	308.3	0.71	6.28	6.98	410.2
South	71.1	154.0	225.2	3.8	273.0	276.8	0.62	7.24	7.86	509.8
All-India	109.2	362.1	471.3	25.8	768.3	794.1	2.66	24.18	26.84	1,292.2

Source Pritam (2018)

a year and this number is found to be highly inadequate to meet the requirements of teacher educators. Not only admissions in Diploma and M.Ed. programmes are small, compared to those in B.Ed. programme, but also admissions in the former two categories are declining over the years (UNESCO, 2021).

Pre-service training programmes are largely funded by state governments. Under the centrally sponsored scheme (funded by union/central government) on teacher education, which was initiated in 1987 after the *National Policy on Education 1986*

was formulated, and revised in 2012 (MHRD, 2012), Union government supports over 650 institutions, including the DIETs, CTEs, and IASEs, apart from central universities. Financial support is largely provided by the Union government under the programme of *Sarva Shiksha Abhiyan*, later restructured into a new scheme called *Sangra Shiksha Abhiyan*. State governments support a few government teacher education institutions set up by the state government and government-aided private institutions; and a large number of private institutions are essentially supported by student fee; the latter are also known as self-financing institutions. The centrally sponsored scheme on teacher education is the core programme that promotes and finances teacher education programmes in the country. It provides funding for setting up of the DIETs, and BITEs, and strengthening of CTEs, IASEs, SCERTs, etc.

It is important to recognise that “in-service education cannot be an event but rather is a process, which includes knowledge development and changes in attitudes skills, disposition and practice through interactions both in workshop settings and in the school” (NCERT, 2005, p. 112). Government also felt that these programmes must be comprehensive, and continuous rather than one-off events or a series of unlinked training programmes. Pre-service and in-service teacher training programmes cannot be seen as two separate systems of training teachers. As stated in the *National Policy on Education 1986*, “teacher education is a continuous process, and its pre-service and in-service components are inseparable” (GoI, 1986). Some institutions do provide both, but many concentrate on either, viewing them as two separate ones with no inter-relation. It is necessary to strengthen both, recognising the inter-relationship between the two.

5 Attempts to Reform Teacher Education

As the *National Education Policy 2020* has underlined, teachers are “the most important members of our society and the torchbearers of change.” Teachers, teacher quality, and quality of teacher education are central to provide quality education for all. Provision of quality teachers has been on the agenda for educational policies, plans and programmes which are being implemented across the country since independence. The NCTE, which was originally set up in 1973, as an advisory body for the Union and state governments on all matters pertaining to teacher education, could not effectively perform its essential regulatory functions to ensure maintenance of standards in teacher education and preventing proliferation of substandard teacher education institutions. As a major structural reform measure, following the *National Policy on Education 1986*—and the revised policy along with the *Programme of Action* in 1992 (MHRD, 1992), the NCTE was accorded statutory status in 1993 through an Act of the national Parliament as a regulatory body in teacher education. Its mandated functions include coordination and monitoring of teaching education, laying down norms and guidelines for courses of study, for starting new course, for starting new institutions, laying down standards for curriculum and syllabi, examinations, setting minimum qualifications for teachers, levy of tuition and other fees,

and above all, take “all necessary steps” to prevent commercialisation of teacher education (NCTE, 2020, p. 4). Thus it is vested with both regulatory and academic roles in teacher education; and it does not have any funding responsibilities. But its performance has been under attack for valid reasons for quite some time from several corners, the main failures being its inability to control growth of commercialisation of teacher education, to develop coordinated plans for the development of teacher education in the country, and to ensure high quality in teacher education programmes. A report in *India Today* (Maheshwari, 2007) gave a ‘report card’ on NCTE that states: NCTE allowed unchecked proliferation of teaching shops across the country; granted affiliation to colleges irrespective of demand for teachers; offered no standardisation of teachers’ qualifications; concentrated more on infrastructure rather than teaching processes and curriculum; gave affiliation to more B. Ed. colleges than necessary and neglected primary education; and processed applications out of order, charging, in the absence of budgetary controls, huge amounts (Rs 40,000) per applicant. Hundreds of private institutions have been established by private actors without a priori formal recognition by the NCTE. As a result, the overall growth has been unregulated and haphazard. Many private institutions, solely depending on student fees, are found to be having poor infrastructure, low quality teacher educators, and to be actually doing bad business in education, producing teachers with low aptitude and poor subject and pedagogic knowledge. As noted by the committees such as Sudip Banerjee Committee (2007–08) (MHRD, 2008) and Justice Verma Commission (GoI, 2012), the rapid growth of private—unrecognised (and also recognised)—institutions is the main source of poor quality of teacher education and thereby poor quality of teachers and the school system. These and several other committees/commissions accordingly recommended strict measures to curb the growth of commercialisation of teacher education by the private institutions. As widely acknowledged, all this—the unregulated growth of teacher education institutions, non-adherence of the institutions to the norms and regulations of the NCTE, and the overall deficit in quality of teacher education institutions and thereby of teachers—reflects weak governance by the NCTE, including prevalence of ineffective and unfair practices in the Council and in the teacher education institutions. The Sudip Banerjee committee (MHRD, 2008) has gone to the extent of recommending altogether scrapping of the NCTE for its poor performance and involvement in high level of corruption and inefficiency.

It is now being proposed by the government to thoroughly overhaul and strengthen the NCTE to enable it to perform its functions effectively, and also to streamline the whole system. It has to be noted that the NCTE is the sole academic authority responsible for prescribing teacher qualifications; it is a statutory body vested with the responsibility of maintaining quality and standards in all teacher education institutions, to maintain planned and coordinated development of teacher education, regulating establishment of the teacher education institutions, laying down norms and standards for various programmes of study in those institutions, setting minimum qualifications for teacher educators, regulations regarding programmes, their content and duration, and minimum qualifications for admission into various programmes of study; it also grants recognition to the eligible institutions—government, government-aided and private self-financing. Secondly, when institutions are

found to be involved in undesirable practices, and not following the norms and regulations specified by the NCTE, strict actions are being initiated: they are being closed down. It is also resolved now that all institutions must necessarily obtain formal recognition from the NCTE. Further, a large number of institutions and their programmes are not so far accredited. Only a very few institutions are accredited by the National Assessment and Accreditation Council (NAAC). Between 2002 and 2017, only 1,522 teacher education institutions were accredited. NAAC with the help of NCTE develops quality parameters for assessment and accreditation of the programmes/institutions. Now accreditation of teacher education institutions (and all higher education institutions) has been made mandatory. All institutions are now required to regularly revamp the outdated curricula and teaching methods and adopt the *National Curriculum Framework on Teacher Education* 2005 and 2009, which highlighted specific objectives, broad areas of study in terms of theoretical and practical teaching/ learning, and curricular transaction and assessment strategies for the various teacher education programmes, and in all suggested a thorough reform of the curriculum in teacher education programmes. The framework has also suggested quite a few new flexible approaches to teacher education. Further, following the regulations made by the NCTE 2014, many universities and state governments revised the programmes of teacher education. The *National Education Policy 2020* envisages developing a large network of diverse kinds of assessment and accreditation bodies for the entire higher education including teacher education institutions, and restructuring of the NAAC. According to the *Policy*, the NCTE is now mandated to act as professional standards setting body and set national professional standards for teachers, and also to function as a national mission for mentoring the teachers and teacher educators.

In order to address various concerns, including inadequate infrastructure to produce quality trained teachers, a few major measures have been initiated by the Government of India in the recent years. To ensure adequate supply of trained teachers, initiatives are being made to enhance the institutional capacity of the existing institutions. It is necessary that synergy is brought between institutional structures operating at different levels, for example, between institutes of teacher training and colleges. On the recommendation of the Justice J. S. Verma Commission, a massive scheme titled Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching (PMMMNTT) was launched in 2014 to provide extensive facilities for professional development of teachers at all levels, including organising leadership programmes for school heads. Under this Mission, *inter alia*, all central universities are encouraged to set up Schools of Education with Departments of Education/Teacher Education in the universities, which will provide teacher education and training, apart from carrying out research and other activities; two Inter-University Centres for Teacher Education have been set up to promote research in teacher education; a National Resource Centre for Education has been created; and 50 Centres of Excellence for Curriculum and Pedagogy are proposed to be established. A National Centre for School Leadership was established in the National Institute of Educational Planning and Administration to provide training to head

teachers. A few teacher education universities are also being set up, which will exclusively focus on teacher education (e.g., Indian Institute of Teacher Education—a State Public University established by Government of Gujarat, Tamil Nadu Teacher Education University, and Delhi Teachers University). The PMMMNMTT launched in 2014–15, was a major national initiative, which was envisaged to address comprehensively all issues related to teachers, teaching, teacher preparation and professional development. The Mission aims at having a holistic and well-coordinated approach to address current and urgent issues such as supply of qualified teachers, attracting talent into teaching profession and raising the quality of teaching in schools and colleges; and at the same time it intends to pursue a long term goal of building a strong professional cadre of teachers. Its proposed goals include creation and strengthening of institutional mechanisms in teacher education through offering pre- and in-service training, re-training, refresher and orientation programmes in generic skills, pedagogic skills, discipline-specific content upgradation, ICT and other technology enabled training and other appropriate interventions (MHRD, 2015).

Among the other measures taken in the recent past include, discontinuation of the provision of teacher education through open and distance mode and induction of ICT in the teacher education institutions with a view to produce ICT-empowered teacher. A long duration integrated teacher education programme for 4–5 years is felt to be good to develop good teachers. Long ago, the National Commission on Teachers (1983–85) recommended long duration teacher education programmes, including long duration practice teaching sessions. A Review Committee of the National Policy on Education in 1990 (GoI, 1990) has recommend four-year integrated programmes on the pattern followed by Regional Colleges (now known as Regional Institutes) of Education. Accordingly, the duration of the core teacher education programmes was increased to two years, apart from several universities and institutions starting 4–5 year duration integrated teacher education programmes. Four-five year duration programme is becoming the norm, as it was also proposed in the *National Education Policy 2020*.

The Government of India has launched in 2017 a digital platform DIKSHA (Digital infrastructure for knowledge sharing) that offers engaging learning material, relevant to the prescribed school curriculum, to teachers, students and parents. The platform incorporates internet scale technologies and enables several use-cases and solutions for teaching and learning in schools. The government has also launched in 2021 another major national programme NISHTHA (National initiative for school heads' and teachers' holistic advancement)—an integrated teacher training programme for building the capacity of elementary stage teachers in the entire country with an inbuilt mechanism of mentoring and monitoring. NISHTHA aims to build capacity of 4.2 million teachers and school heads at the elementary level on learner-centered pedagogies to improve learning outcomes of students, develop social-personal qualities, promoting health-, physical-education- and art-integrated learning, besides ICT integration across subject areas.

Among micro level innovative experiments, over the years, some significant efforts have been made and a few important experiments have been initiated to impart quality teacher education in innovative ways. For example, the Department

of Education of the Banasthali Vidyapeeth tried out a learner-centric curricular programme of teacher education, which the students named *Anweshana* in cognisance of its main feature of self-exploration (Lakshmi & Surana, 2007, p. 20). Another experiment is *Green Teacher* which is a one-year diploma in environmental education for teachers and educators developed and designed by Centre for Environment Education (Ahmedabad) in partnership with the Commonwealth of Learning (Vancouver, Canada). Offered through distance mode, this course is the first of its kind in India. The course is designed with the objective to enable teacher-learners to effectively take up environmental concerns and issues in the classroom, and engage their students in practical, action-oriented environmental education activities and projects. Thus, Green teacher is visualised as a project offering a continuing learning opportunity in environment education to practicing teachers (Jain & Menon, 2007, p. 66). There are indeed quite a few good practices in teacher recruitment, training and management adopted in several states in India (NUEPA, 2014).

6 Reforms on the Anvil

The great respect for learning in ancient, medieval and modern India, often cited by national leaders, tallies poorly with the low social and economic status accorded to the teacher in the modern times in India. Teacher and teacher education system seem to be receiving poor status for a long time. Unfortunately teachers have lost faith in their own profession before the society has lost faith in them. Many experts, committees and commissions have recommended some major reforms; but they could not be sufficiently acted upon. For example, the Education Commission (1966) has argued, teacher education has to be “brought into the mainstream of academic life of the universities on the one hand and of school life and educational developments on the other.” The Commission also recommended that all institutions, including teacher education institutions have to be comprehensive units, horizontally and vertically linked to other education institutions. Rather the teacher education institutions should not function in isolation. After all, teacher education is a multi-disciplinary process, and needs experts in various areas, who would be available in multi-disciplinary universities and institutions and not in stand-alone mono-faculty institutions. As Myrdal (1968) noted, the transdisciplinary approach requires the specialist to go beyond the boundaries of her/his own area of expertise, and become involved in the total aspect of an issue. Interdisciplinary study/research is a team approach, with the various specialists pooling their resources. Even if we adopt a transdisciplinary approach to research and education, for practical reasons there will, of course, always remain the necessity for a certain amount of specialisation (see O’Toole, 1972). So specialists come together to produce interdisciplinary work. As Yashpal Committee (GoI, 1999) noted, comprehensive universities provide platforms and mechanisms which enable teachers to interact among themselves as professionals, and also with other professionals such as scientists, scholars and college teachers. Unfortunately

teacher education institutions in India have been isolated institutions with no horizontal or vertical linkages with the rest of the education system. Teacher education needs to be considered and planned as a part of a holistic programme of ‘teacher development’ and of the national education system, and a holistic policy framework for teacher education is needed.

Having noted that the teacher education institutions are not in the realm of universities and higher education institutions, nor are they linked to larger system of education (Béteille et al., 2020), the *National Education Policy 2020* (GoI, 2020) also emphasised the need for integration of teacher education with the mainstream higher education, and recommended abolition of all stand-alone institutions including teacher education institutions, by closing them or merging them with comprehensive universities as an integral part of the universities. The policy also stresses the need to make all professional and technical higher education, including teacher education, holistic and comprehensive in its approach, by introducing several disciplines along with skills and knowledge in the main course of study. Third, the *Policy* also promises to necessarily make all first degree programmes including teacher education programmes (like Diploma/certificate course in teacher education and B. Ed.) into four-year programmes. The B. Ed. programme will be the only programme in the entire country that will be offering pre-service teacher education programme to produce teachers for foundational level to senior secondary level. The present *Policy* recommends introduction of 4-year integrated B. Ed. as a dual-major holistic Bachelor’s degree in Education as well as a specialised subject to be offered in multidisciplinary institutions/universities. The minimum educational qualification for teachers for recruitment would be four-year duration integrated B. Ed. degree. Only candidates with four-year B. Ed. degree and TET certificate will be eligible to apply for teacher recruitment in schools. Long ago, the National Commission on Teachers (1983–85) for school teachers, recommended a 4-year training course after senior secondary, or preferably a 5-year course leading to graduation and training in teacher education. NCTE (2009) has noted that initial training of elementary school teachers continues to suffer from isolation, low profile and poor visibility in view of it being a non-degree programme. The 2020 *Policy* addresses these concerns.

Earlier approaches on teacher development focused on improving teacher attributes, teacher training and skill development; in the recent years the focus has been on recruitment, teacher attendance (absence), supervision, regulation of teacher education institutions etc. In contrast, the present policy adopts a systems approach to quality teaching. Realising that “the status of the teacher reflects the socio-cultural ethos of the society; [and]... that no people can rise above the level of its teachers” (GoI, 1986), the present policy adopts a holistic approach linking the status of the profession, the quality of new teacher recruits, quality of pre-professional development, career prospects, and the work environment, which encompasses the physical and academic environment, and governance systems that ensure accountability, and provide leadership. It has further envisaged for improving the quality of education by recruiting and distributing well qualified and trained teachers. According to the policy, teachers’ shortage would be addressed by recruiting adequate subject-wise teachers in schools or school complexes which in turn will be sharing these teachers

among schools within their jurisdiction. The selection of teachers will be based on their classroom demonstration or interview apart from TET or national testing agency (NTA) test scores. The TET will be strengthened to inculcate better test materials, both in terms of content and pedagogy and will also be extended to cover teachers across all stages (foundational, preparatory, middle and secondary) of school education in both public and private schools. For subject teachers, suitable TET or NTA test scores along with a classroom demonstration will be utilised for recruitment. A technology-based comprehensive teacher-requirement planning forecasting exercise will be conducted by each state to assess likely subject-wise teacher vacancies over the next two decades.

The *Policy* has made suggestions for stopping the harmful practice of excessive teacher transfers and recommended that, transfer of teachers will be conducted through an online computerised system that ensures transparency. The Policy also resolves to ensure transparency in the teacher recruitment process by introducing 'new professional standards for teachers' (NPST) along with merit-based promotion of teachers. After all, weak professional norms make teaching a second class profession (Béteille et al., 2020). Finally, according to the Policy, the NCTE may get scrapped, or it may be transformed into a professional standard setting body in teacher education. It will be devoid of regulatory role which will be transferred to the now proposed National Higher Education Regulating Council—the single regulatory body for higher education, under the Higher Education Commission of India the apex body of higher education in India. These policy reforms suggest that teacher education in India is on the brink of a major transformation.

7 Concluding Observations

The University Education Commission (1948–49) observed, “People in this country have been slow to recognise that education is a profession for which intensive preparation is necessary as it is in any other profession”. This view seemed to continue to prevail, as the policy makers have rarely attempted to constructively react to growing tendencies of lack of attention to quality education/training of teachers in India. Of late there has been a change in the approach to teacher education. It is being promised to provide teacher education an important place in the educational structure of the country, as it is teacher education that provides teachers at all levels of education and to all institutions of education, and that hence the quality of education critically depends upon the quality of teachers, which, in turn, depends on teacher education system in the country. Teacher education/training institutions are strategically important “power plants” that generate moral and intellectual energy among the students to prepare people for a changing society and for development, as Gunnar Myrdal (1968) stated. They provide teachers with values and methods of resolving value conflicts. Thus, theirs is a unique great contribution to the nation building and to the global society. Hence, “good teacher quality is increasingly being seen as an imperative to meet the changing landscape of social and educational aspirations and the demands

of the global “knowledge economy” (Sharma, 2019). Accordingly, teacher education began getting more attention in the policy space in recent years, and policy makers who are concerned with the quality of schooling pay serious attention to rejuvenate and revitalise the teacher education system.

The key challenge in the education system that is being faced all over, is to ensure that professionally committed as well as academically qualified young talent enters the teaching profession by choice. For this, for the teacher education institutions, and equally importantly the other education institutions should be made attractive, with attractive teaching–learning environment, exciting opportunities for professional development, adequate resources for experimentation and innovation, and a respectable status for the teaching profession.

The second important challenge countries like India face is growing private sector in all levels of education, including specifically teacher education. The private sector has grown in education in India not due to any policy initiative, but due to the absence of any policy on private education, or simply policy inaction or policy vacuum. With commercial motives, private institutions came up in large numbers and they not only posed challenges for maintaining quality and standards in teacher education, but also posed various other problems. Through their variety of undesirable practices in areas of management of the institutions, recruitment of teachers, admissions, fees and even in teaching, such values are imparted in the teachers and students that lead to the erosion of the public good nature of education. While many committees in India have recognised the need to curb the trends towards commercialisation in education, few attempts have been so far successful. A clear long term policy perspective is required on the role of private sector in higher education. The policy 2020 intends to promote participation of philanthropic private sector in education, but not commercially motivated players. Really innovative measures are required to distinguish between the two, as all private players enter education sector under the garb of philanthropy, and to take stern and even politically difficult action against the cheap quality, profit-oriented private institutions.

Lastly, a strong database on teacher education has to be built. The database has to include not only a variety of aspects on teacher education institutions, the programmes, their content, quality and relevance, number of students/trainees, their socioeconomic background, teacher educators, their quality and qualifications, fees, private and public finances, policies and practices in the institutions, etc., but also on demand and supply of teaching manpower, the rewards in labour markets for the academic profession—employment/unemployment, salaries, etc. This will help in robust and detailed research, sound policy making, planning and informed choices in educational planning and development.

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